

### **REMARKS**

Claims 21-72 are pending in the application. Claims 21-51 presently stand rejected. Claims 52-72 are withdrawn from prosecution. By this paper, claims 30, 36 and 49-51 have been cancelled and claims 21, 37, 39, 40 and 45-47 have been amended. Reconsideration of the application in light of the amendments and arguments herein is respectfully requested.

#### **Amendments to the Specification**

In paragraph 2 of the Office Action, the Examiner has provided guidelines for the specification of a utility application. Accordingly, the Specification has been amended at several places to insert the proper section heading, in the suggested format. Approval of these amendments to the specification is respectfully requested.

#### **Objections to the claims**

Claims 40 and 45-47 stand objected to for informal matters. By this paper, claims 21, 37, 39, 40 and 45-47 have been amended to correct the noted informalities. Withdrawal of the objection to claims 40 and 45-47 is respectfully requested.

#### **Objections to the drawing**

The drawing stands objected to under 37 C.F.R. 1.83 as failing to show every feature of the invention specified in the claims. According to the office action, the "plurality of deep trenches" of claims 49 and 50 and the "at least one shallow trench" of claim 37 must be shown or the features cancelled from the claims.

By this paper, claim 37 has been amended to conform the claim recitation to the drawing and claims 49 and 50 have been cancelled. Withdrawal of the objection to the drawing is respectfully requested.

#### **Rejections under 35 U.S.C. § 112**

Claims 41-43 stand rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. According to the office action, the application as filed "does not specifically support the limitation of claim 41, '...the deep trench does not penetrate into the second charge storing layer.'" This rejection of claims 41-43 is respectfully traversed. Paragraphs [0054] – [0058] and FIGS. 4A and 4B disclose floating gate layer 18 and floating gate layer 110 which are not penetrated by the deep trench 32c. Withdrawal of the rejection of claims 42-43 is respectfully requested.

According to the office action, the specification as filed does not specifically support claim 36. By this paper, claim 36 has been cancelled.

Claim 39 stands rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. According to the office action, claim 39 lacks antecedent basis for the recitation "the electrically conductive layer." Claim 39 has been amended to recite "the charge storing layer extends at least partly over the shallow trench." Support for this amendment is contained throughout the application, including in particular FIGS. 3A and 3B and the accompanying text. Withdrawal of the rejection of claim 39 is respectfully requested.

#### Prior art rejections

Claims 21-29 and 45-48 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. patent publication no. 2002/0024081 to Gratz ("Gratz"). Claims 21, 22, 25, 26, 28-32, 34, 35, 40-46 and 49-51 stand rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. patent publication no. 2003/0075773 to Deml, et al. ("Deml"). Claims 32 and 33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gratz in view of U.S. patent number 5,545,583 to Lam, et al. ("Lam"). Claims 37-39 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gratz in view of U.S. patent publication no. 2002/0058381 to Lee ("Lee").

By this paper, claim 21 has been amended to distinguish this claim over the cited references. Claim 21 has been amended by rewriting the claim to include the limitations of claims 29 and 30 and canceling claim 30. Specifically, as amended, claim 21 recites

a shallow trench arranged in the doped semiconductor layer, wherein the shallow trench does not penetrate through the charge storing layer and the insulating layer and the shallow trench extends about laterally symmetrical in all directions beyond an edge of the deep trench

In the office action, claim 30 stands rejected as being anticipated by Deml. However, it is respectfully submitted that claim 21 as amended includes limitations nowhere shown, described or suggested by Deml. Deml discloses a region 215 that may be considered to be a "deep trench" having an upper portion that may be considered to be a "shallow trench," as proposed by office action. However, claim 21 as amended is limited to a semiconductor circuit arrangement including a "shallow trench that extends about laterally symmetrical in all directions beyond an edge of the deep trench." This is clearly not disclosed by Deml, and Deml does not suggest the possibility or desirability of forming a shallow trench in this manner.

Accordingly, claim 21 includes limitations absent from Deml. Withdrawal of the 35 U.S.C. § 102 rejection of claim 21 is therefore respectfully requested. Claims 22-29, 31-35 and 37-48 are dependent from claim 21 and are allowable for the same reasons.

Further, the office action has proposed to combine Deml and Lee in rejecting claims 37 and 39. It is respectfully submitted that there is not adequate suggestion to combine these references in the proposed manner. These two references relate to very different concepts of EEPROM memories. Deml relates to NAND-type CC-EEPROM (charge coupled) without separate source/drain regions for each memory cell and without select transistors for each cell. Lee actually relates to a memory type with continuous source/drain lines to each memory cell with a select transistor for each memory cell. These are two very different memory cell technologies. While they may be from the same general field of endeavor, that of semiconductor memory design, their associated types of memory are so different that the ordinarily skilled artisan would not look from one type to the other for solution of design problems. The two memory types are so dissimilar that combining them would not be simple nor would it produce the semiconductor circuit arrangement as proposed by the office action.

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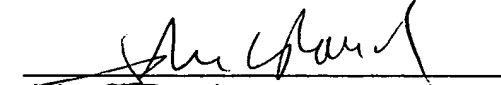
Amendment dated: November 14, 2005

Reply to Office Action dated: May 13, 2005

Accordingly, withdrawal of the objections to the specification, drawing and claims and the rejections of the claims is respectfully requested. Reconsideration and allowance of the application are respectfully requested.

With this response, the application is believed to be in condition for allowance. Should the examiner deem a telephone conference to be of assistance in advancing the application to allowance, the examiner is invited to call the undersigned attorney at the telephone number below.

Respectfully submitted,

  
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November 14, 2005  
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